25/05/2018 *InterCity - seminar*

Neuchâtel - Fribourg/Freiburg
Bern

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Time	Speaker	Talk
14:00	Alexander Kolpakov (Neuchâtel)	**Combinatorics of subgroup counting in free products of cyclic groups**
		We shall derive a generating series for the number of free subgroups of finite index in certain free products of cyclic groups. We shall also give a generating series for the number of their conjugacy classes. This computation turns out the same as counting the number of orientable cellular complexes of dimension 2 and 3, as well as their isomorphism classes. Our solution rests on a classical theory by Jones and Singerman, later developed by Lienhardt and co-authors, and on the theory of species by Joyal, Flajolet and Sedgewick. There is also a number of curious facts related to the mentioned functions. The talk will focus on the interplay between algebra, geometry and combinatorics. This is joint work with Laura Ciobanu (Heriot-Watt University, UK).
15:30	Immanuel van Santen (Basel)	**Embeddings of lines and planes into algebraic groups**
		In this talk we will study closed embeddings of affine varieties into affine algebraic groups G up to algebraic automorphisms of the underlying variety of G. After recalling some classical results concerning embeddings into the affine space, we will focus on embeddings of the affine line into arbitrary groups and embeddings of the affine plane into SL_2. Mainly we will discuss the following two results: -If G is a group without characters of dimension different than three, then all embeddings of the affine line are equivalent. -There is an infinite family of pairwise non-equivalent embeddings of the affine plane into SL_2. This is joint work with Peter Feller and Jérémy Blanc.

The talks will take place in B77, ExWi, Sidlerstrasse 5, University of Bern.

For further informations please refer to the seminar's webpage

www.combinatorialmethods.ch/intercity/

or contact the organisers:

Emanuele Delucchi (Fribourg) — Jan Draisma (Bern) — Elisa Gorla (Neuchâtel)